

## ABSTRACT OF THE DISCLOSURE

REPEATERS SHARING A COMMON MEDIUM FOR POWER LINE  
COMMUNICATIONS

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A system for communications on a bi-directional medium includes a first repeater, a second repeater, a third repeater and a fourth repeater, each of which is coupled to the medium. The first repeater and the second repeater communicate with each other on a first band for transmission from the first repeater to the second repeater, and on a second band for transmission from the second repeater to the first repeater. The second repeater and the third repeater communicate with each other on a third band for transmission from the second repeater to the third repeater, and on a fourth band for transmission from the third repeater to the second repeater. The third repeater and the fourth repeater communicate with each other on the second band for transmission from the third repeater to the fourth repeater, and on the first band for transmission from the fourth repeater to the third repeater.

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